

ABSTRACT

The subject invention is hollow nanoparticles that comprise particle-forming first proteins (e.g. hepatitis B virus surface-antigen protein), containing a bio-recognizing molecule for recognizing a specific cell, wherein at least one of the first proteins interacts with a second protein (e.g. hepatitis B virus core-antigen protein) forming a capsid structure. With this structure, the present invention provides hollow nanoparticles, that allow transfer of a substance to a specific cell or tissue, and can be manufactured with stable productivity. The present invention further provides a drug made of the hollow nanoparticles.